AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1.(Currently Amended) A method for analyzing a loop interface failure comprising ~~the steps of~~:

detecting per route that abnormalities occur in all loop interfaces which are multiplexed and to which devices are connected, and

when the abnormalities in the loop interfaces are detected, detaching all devices connected to at least one of the loop interfaces.

2.(Currently Amended) The method for analyzing a loop interface failure as claimed in claim 1, wherein the ~~step of~~ detecting the abnormalities in the loop interfaces includes ~~the steps of~~:

detecting that receptions of commands have ceased, which commands are regularly transmitted through the loop interfaces to which the devices are connected,

informing the routes each other that the receptions of the commands have ceased, and

when detecting that receptions of the commands have ceased in all routes, detecting that abnormalities occur in all of the loop interfaces.

3.(Currently Amended) The method for analyzing a loop interface failure as claimed in claim 1, further comprising a ~~step of~~ performing a loop diagnosis for identifying a faulty device by accessing from a route, in which all of the devices were detached from the loop interface so that the loop abnormality has been resolved, to another route.

4.(Currently Amended) The method for analyzing a loop interface failure as claimed in claim 3, further comprising ~~the steps of~~:

when the loop abnormalities occur in all of the multiplexed loop interfaces, judging per route whether the loop abnormality is resolved in a certain period of time, and

when the loop abnormalities were resolved in the certain period of time, inquiring disk controlling means whether they detached all of the devices, and when all of the devices were detached by the disk controlling means, performing countermeasure processing against a double-route link failure including a loop diagnosis by the ~~step of~~ performing the loop diagnosis.

5.(Original)The method for analyzing a loop interface failure as claimed in claim 4, wherein the certain period of time is so set as a little longer than a period of time necessary for the disk controlling means to detach all of the devices when the loop abnormalities occur in all of the multiplexed loop interfaces.

6. (Original) The method for analyzing a loop interface failure as claimed in claim 3, wherein a device determined as faulty in the loop diagnosis is detached from the loop interface, and the loop interface is to be in use again.

7. (Original) The method for analyzing a loop interface failure as claimed in claim 6, wherein the loop diagnosis for identifying a faulty device is performed by accessing to disk controlling means connected to another loop interface via the disk controlling means connected to the loop interface which is in use again.

8. (Currently Amended) A program embodied in electrical signals, said program enabling a computer to execute the method ~~each step~~ as claimed in claim 1.

9. (Currently Amended) A computer-readable storage medium recording thereon a program which causes a computer to perform the method ~~said steps~~ of claim 1.

10. (Original) A system for analyzing a loop interface failure comprising:

loop connection switching means for connecting and detaching devices to and from multiplexed loop interfaces;

disk controlling means for controlling the loop connection switching means; and

a first interface for transmitting and receiving data each other between the disk controlling means; wherein

the disk controlling means have, when detecting that abnormalities occur in all of the loop interfaces, functions of outputting to the loop connection switching means instructions to detach all devices connected to at least one of the loop interfaces.

11. (Original) The system for analyzing a loop interface failure as claimed in claim 10, wherein the disk controlling means, when detecting that receptions of commands have ceased, which commands are regularly transmitted through loop interfaces to which devices managed by the disk controlling means are connected, inform via the first interface to another disk controlling

means that the receptions of the commands have ceased, and

when detecting that receptions of commands have ceased in all disk controlling means, detect that abnormalities occur in all of the loop interfaces.

12. (Original) The system for analyzing a loop interface failure as claimed in claim 10, wherein the disk controlling means includes loop diagnostic means for performing a loop diagnosis to identify a faulty device by accessing to disk controlling means connected to another loop interface via the disk controlling means connected to the loop interface in which all connected devices were detached so that the loop abnormality has been resolved.

13. (Original) The system for analyzing a loop interface failure as claimed in claim 12, wherein the loop diagnostic means detaches a device determined as faulty in the loop diagnosis from the loop interface so as to allow the loop interface to be in use again.

14. (Original) The system for analyzing a loop interface failure as claimed in claim 13, wherein the loop diagnostic means performs the loop diagnosis for identifying a faulty device by accessing to disk controlling means connected to another loop interface via the disk controlling means connected to the loop interface which is in use again.

15. (Original) The system for analyzing a loop interface failure as claimed in claim 10, further comprising:

enclosure service means which connects to the disk controlling means and to the devices through one loop interface of the multiplexed loop interfaces;

and a second interface for transmitting and receiving data each other between the loop interface and another loop interface; wherein

the enclosure service means communicates with other enclosure service means, controls the loop connection switching means when abnormalities are detected in all of the loop interfaces so as to detach all devices connected to the loop interface.

16. (Original) The system for analyzing a loop interface failure as claimed in claim 15, wherein the enclosure service means includes, when detecting that a reception of commands has ceased, which commands are regularly transmitted through a loop interface to which devices managed by the enclosure service means are connected, means for informing via the second interface to another enclosure service means that the reception of commands has ceased, and

when detected that receptions of commands have ceased in all of the enclosure service means, detects that abnormalities occur in all of the loop interfaces.

17. (Original) The system for analyzing a loop interface failure as claimed in claim 15, wherein the enclosure service means, when the loop abnormalities occur in all of the multiplexed loop interfaces managed by the enclosure service means, judge whether the loop abnormalities are resolved in a certain period of time, and when the loop abnormalities were resolved in the certain period of time, inquire the disk controlling means whether they detached all of the devices, and when all of the devices were detached by the controlling device, perform countermeasure processing against a double-route link failure including a loop diagnosis.

18. (Original) The system for analyzing a loop interface failure as claimed in claim 15, wherein the certain period of time is so set as a little longer than a period of time necessary for the disk controlling means to detach all of the devices when the loop abnormalities occur in all of the multiplexed loop interfaces.

19. (Currently Amended) The system for analyzing a loop interface failure as claimed in claim 10, wherein the loop interface comprises ~~is~~ a Fibre Channel Arbitrated Loop (FC-AL).

20. (Currently Amended) The system for analyzing a loop interface failure as claimed in claim 10, wherein the devices comprise ~~are~~ hard disk devices.

21. (Original) The system for analyzing a loop interface failure as claimed in claim 10, wherein the disk controlling means monitors abnormalities in a plurality of loop interfaces.

22. (Original) The system for analyzing a loop interface failure as claimed in claim 15, wherein the enclosure service means monitors abnormalities in a plurality of loop interfaces.

23. (Currently Amended) A disk unit device, comprising ~~wherein~~ the enclosure service means, the second service means, the loop connection switching means and the devices, ~~which are~~ claimed in claim 15, which are detached from the disk controlling means ~~as claimed in claim 10~~ to thereby form an independent disk unit means.

24. (Original) The disk unit device as claimed in claim 23, wherein the enclosure service

means includes, when detecting that a reception of commands has ceased, which commands are regularly transmitted through a loop interface to which devices managed by the enclosure service means are connected, means for informing via the second interface to another enclosure service means that the reception of commands has ceased, and

when detected that receptions of commands have ceased in all of the enclosure service means, detects that abnormalities occur in all of the loop interfaces.

25. (Currently Amended) The disk unit device as claimed in claim 23, wherein the loop interface comprises is a Fibre Channel Arbitrated Loop (FC-AL).

26. (Currently Amended) The disk unit device as claimed in claim 23, wherein the devices comprise are hard disk devices.

27. (Original) A program for letting a computer execute each means as claimed in claim 23.